

Introduction to Azure Cloud

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Learning Objectives

- You will be able to create a Azure subscription
- You will be very familiar with Azure portal
- You will have high level understanding of Azure Services categories
- You will be able to create and manage resources through recourse groups.
- You will have good hierarchal understanding of Resource management.
- You will be able to create Tags for billing and other purpose
- You will be able to give role based access to other users.
- And at the end you will provision brand new SQL Database service, and connect it through SSMS and make sure it is ready to start working.



Try Azure for free

Follow these steps to get started. We ask for these details to protect your account and information. There are no upfront charges or fees.



1 About you



2 Identity verification by card



3 Agreement



What's included



12 months of free products

Get free access to popular products like *virtual machines*, *storage*, and *databases* in your first 30 days, and for 12 months after you upgrade your account to pay-as-you-go pricing.



₹13,300 credit

Use your ₹13,300 credit to experiment with any Azure service in your first 30 days—beyond the free product amounts.



25+ always-free products

Take advantage of more than 25 products, including *serverless*, *containers*, and *artificial intelligence*, that are always free. Get these in your first 30 days, and always—once you choose to upgrade.



No automatic charges

You won't be charged unless you choose to upgrade. Before the end of your first 30 days, you'll be notified and have the chance to upgrade and start paying only for the resources you use beyond the free amounts.



Azure Free Subscription

What if I exceed my \$200 limit?

- Email message is sent to subscription owner.
- Deployed resources are disabled until next billing cycle.
- Database and storage account become read only.
- Subscription can be upgraded to Pay-as-you-go

Azure Services Overview

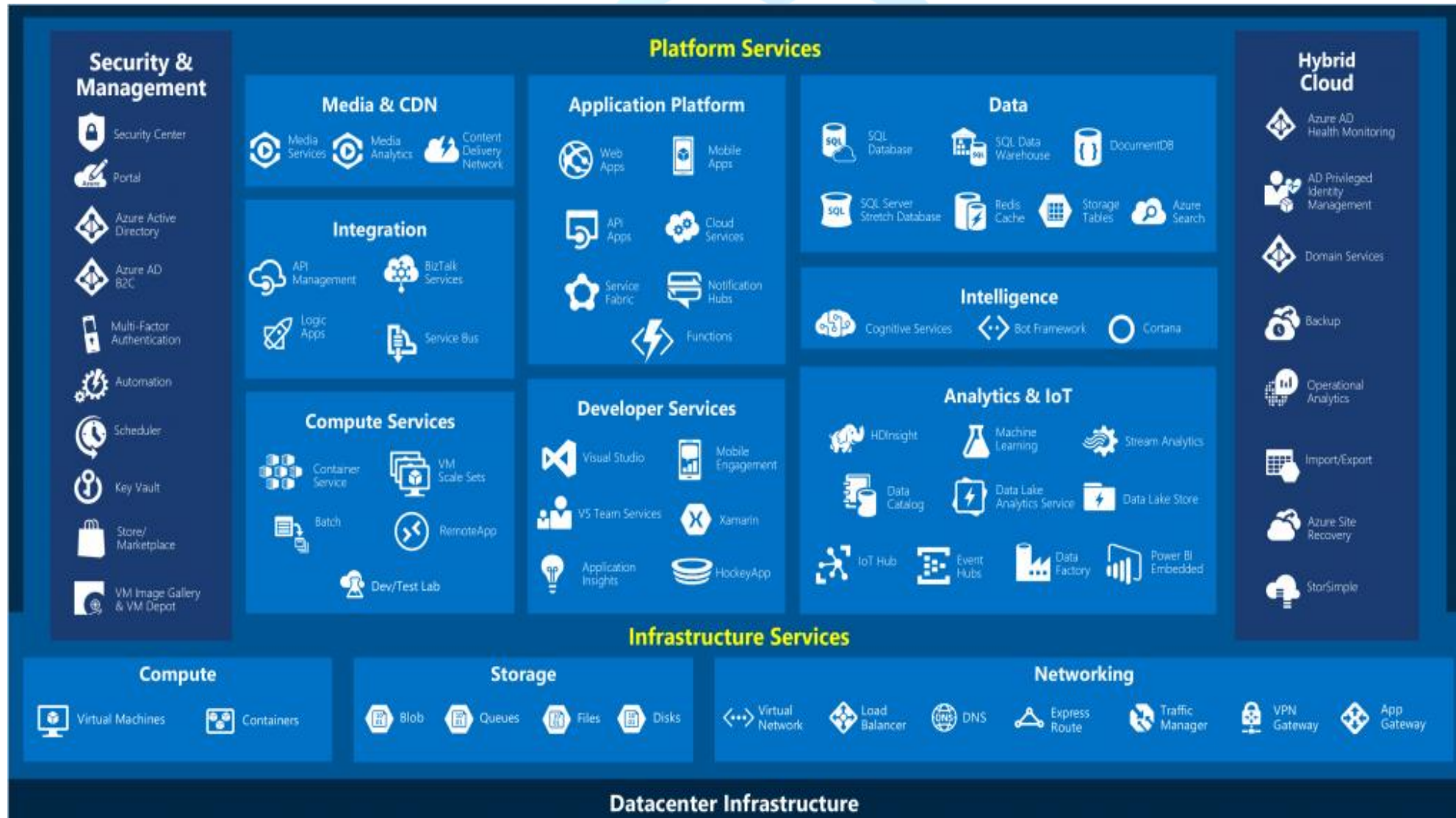


Cloud solution offers lot of benefits

Variety of options provided

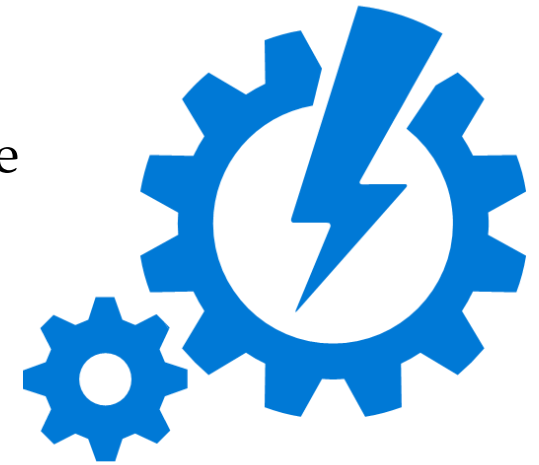
Hybrid options can also be considered

Azure Services



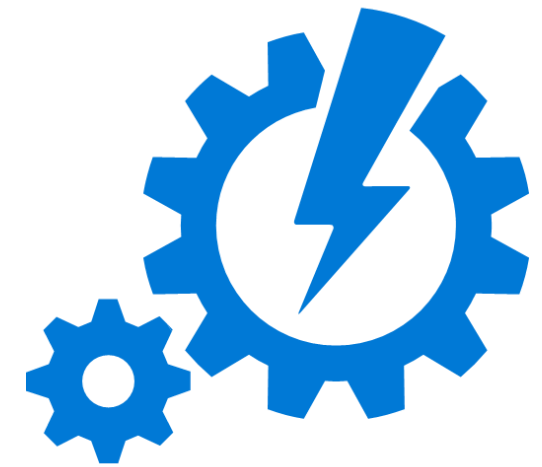
Azure Portal

- Azure Portal is primary graphical user interface (GUI) for controlling Microsoft Azure.
- Alternatively you can do everything using command line tool
- Azure portal is designed in a way to provide continuous availability.
- When you open portal, it get loads from closest location
- Portal continuously maintain behind scene and requires no downtime

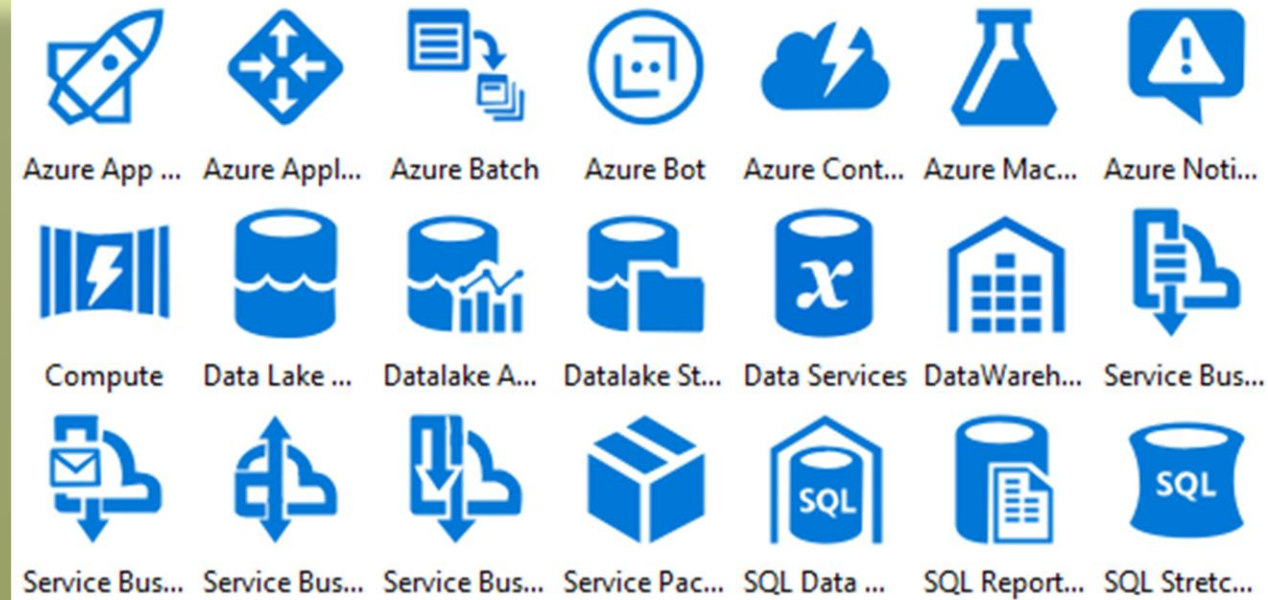


Managed and unmanaged Data Service

- Services are grouped in to Managed and Unmanaged
- Considerations
 - Operational responsibility (Patching, monitoring, backing up etc.)
 - Security responsibility (firewalls, auditing, ACL's etc)
 - Compliance and regulatory adherence responsibility
- Focus on ownership
- Shared responsibility
- Conclusion – Prefer managed service as much as possible

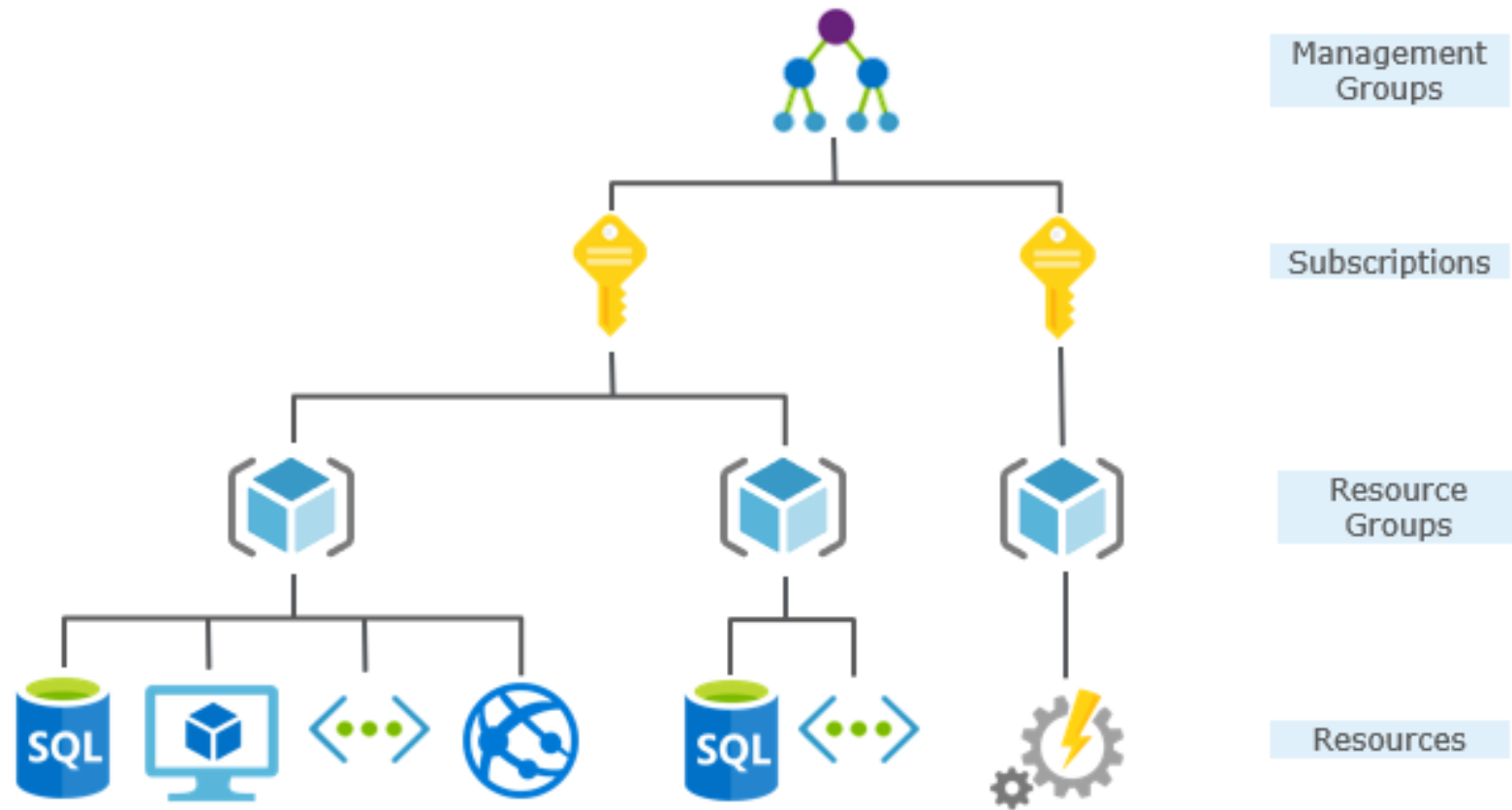


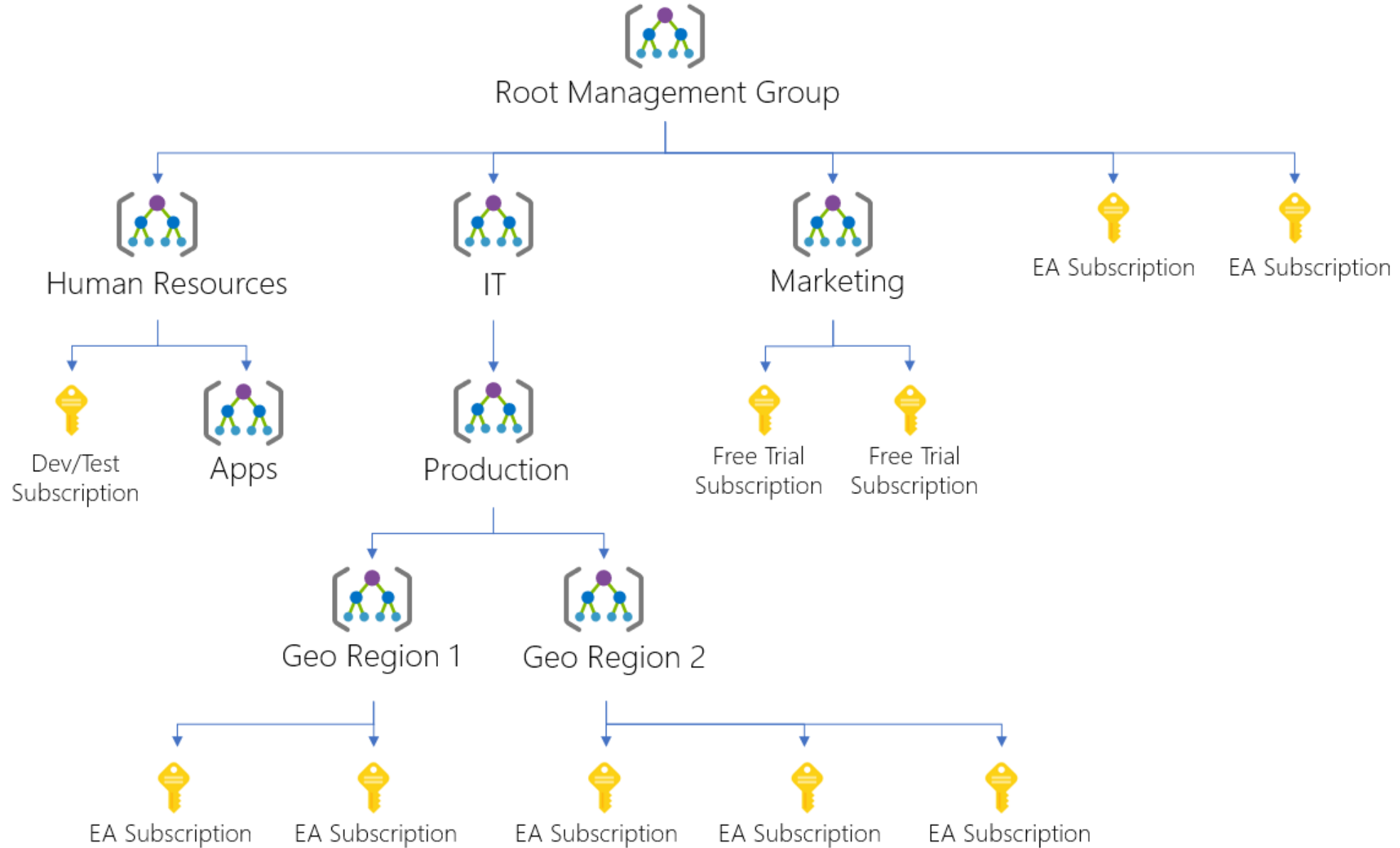
Application resources



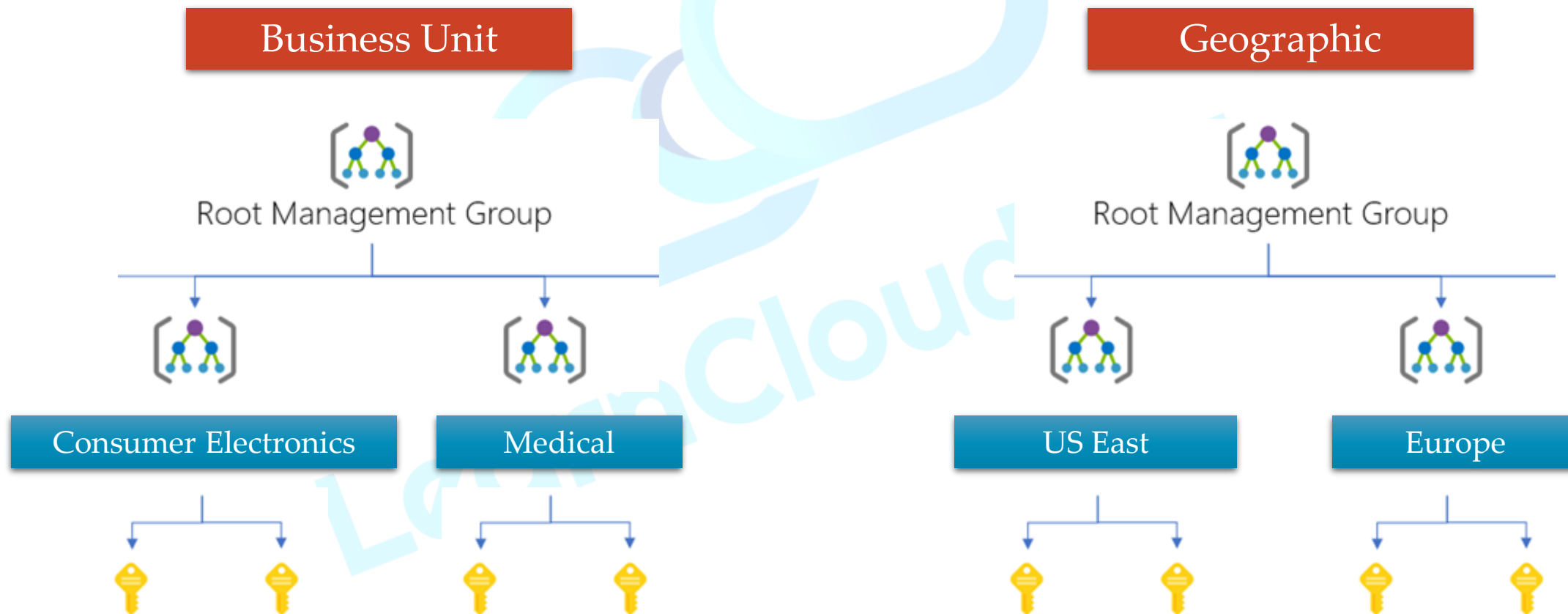
Application

Azure Subscription Management



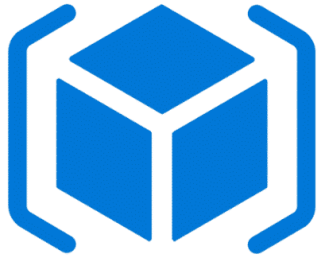


Enterprise divisions



Resource group is a container that holds resources for Azure solution

Resource Group Rules



Azure Resource Groups

- Resources in a resource group should share the same lifecycle
- Each resource can only exist in one resource group
- Resources can be added to or removed from a resource group at any time
- Resources can be moved from one resource group to another
- Resources group can contain resources that resides in different regions
- Resources can interact with resources in other resource group.

Resource Provider

Many common
resource providers are
registered
automatically

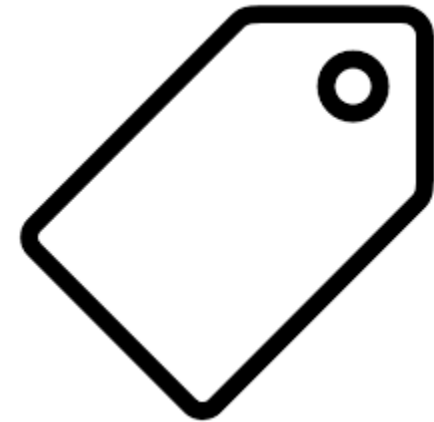
E.g
Microsoft.Compute

Resource providers get
registered with the
subscription

This requires
permissions from
either the contributor
or owner roles

Why Tag Resources

- Tags are additional metadata associated with Microsoft Azure ARM resources.
- Organized deployed Azure resources
- Search by tag
- Facilitates viewing related resources
- Facilitates billing and cost management

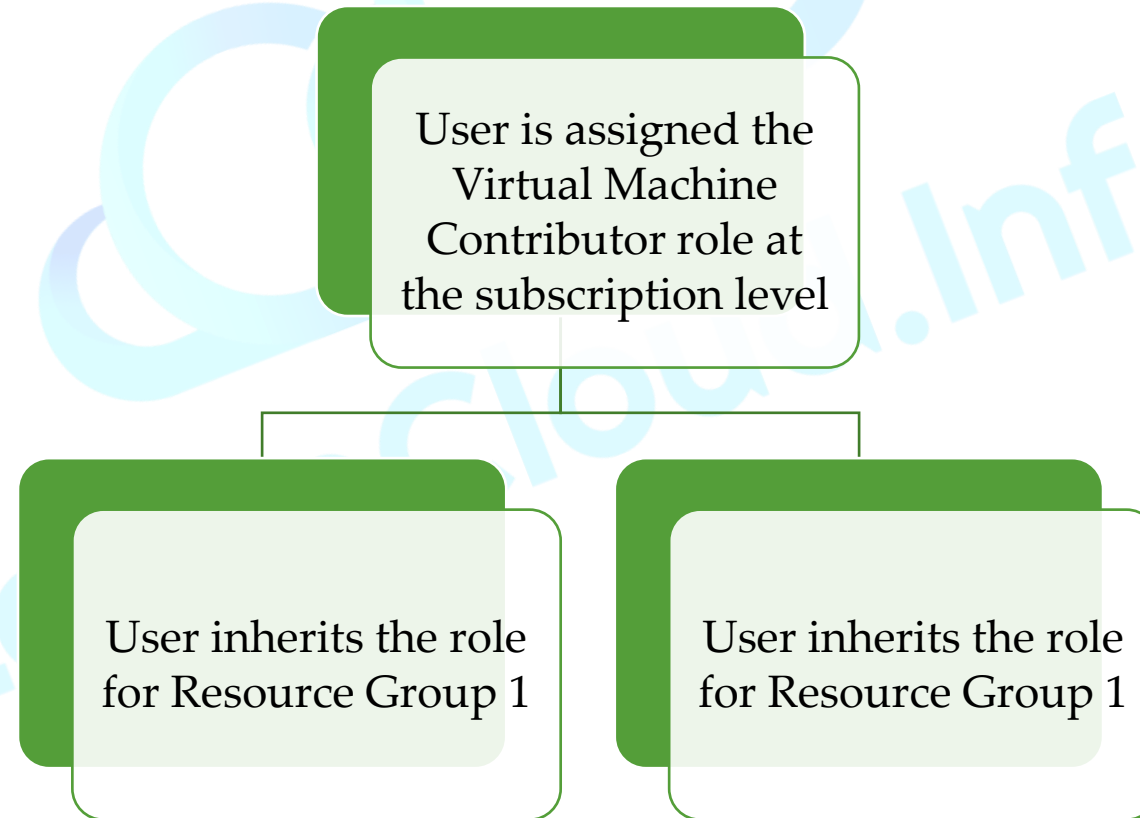


Role Based Access Control (RBAC)

- Roles are applied to a scope
 - Management groups
 - Subscription
 - Resource group
 - Individual resource
- Roles are assigned to
 - Users
 - Groups
 - Service Principal



Role Inheritance



Quiz

- How much you invested to provision new database?
- How long it took you to get it ready?
- Tomorrow if you have more business and you want to scale it, how long it will take?
- Can you estimate how much you have to pay?
- And what about if you have customers in other part of the world?





Learning Outcome

- You created a free Azure subscription
- You should be familiar with Azure portal
- You have high level understanding of Azure Services categories
- You know how to create hierarchy of Resource Management, subscription, and resource group
- You can create and filter Tags
- You know how to setup role based access control
- And by now you can create SQL Server on Azure cloud, connect it with your SSMS and play around it.